CLAIMS

1.   A process for converting a conventionally coded computer application
5   program into a data set suitable for streamed delivery across a network from a
server and concurrent execution on a client in a computer environment,
comprising the steps of:

providing installation monitoring means for monitoring the installation
process of said conventionally coded application program on a local computer
10   system;

wherein said installation monitoring means monitors the modifications that
said installation process makes to the system registry of said local computer
system and records the system modification data;

wherein said installation monitoring means monitors and records any file
15   modifications made by said installation process;

sorting said system modification data and said file modification data and
removing duplicate entries;

parameterizing all of said local computer system's specific registry keys,
value names, and values in said system modification data and said file
20   modification data; and

providing data set creation means for processing said parameterized
system modification data and said parameterized file modification data to create a
data set suitable for streaming over said network.

25   2.   The process of claim 1, wherein said data set creation means creates a
runtime data set, said runtime data set consists of all regular application files and
directories containing information about said regular application files.

3.   The process of claim 2, wherein said data set creation means creates an
30   initialization data set that is the first set of data streamed from said server to said
client, said initialization data set prepares said client for streaming of said runtime
data set.

4.   The process of claim 2, wherein said directories contain lists of file names,
35   file numbers, and the metadata associated with the files in a particular directory.

5.   The process of claim 1, wherein said data set creation means creates a
versioning table that contains a list of root file numbers and version numbers for

tracking application patches and upgrades, and wherein each entry in said versioning table corresponds to one patch level of an application with a corresponding new root directory.

5   6.   The process of claim 5, wherein said versioning table is sent to said client by said server, said client compares said versioning table with said client's root file number for the particular application program to find the necessary files required for a software upgrade or patch.

10   7.   The process of claim 1, further comprising the step of:

providing a user interface that allows an operator to examine all changes made to said local computer system during said installation process and to edit said system modification data and said file modification data.

15   8.   The process of claim 1, wherein said installation monitoring means monitors said application program as it runs and is being configured for a particular working environment on said local computer system and records common configurations of said application program thereby allowing said common configurations to be automatically duplicated on other client machines.

20

9.   The process of claim 1, further comprising the step of:

program profiling means for capturing the sequence of file blocks being accessed during normal execution of said application program.

25   10.   The process of claim 9, wherein said sequence of file blocks is used to pre-cache frequently used blocks on said client before said application program is first used by a user.

11.   The process of claim 9, wherein said sequence of file blocks is used to
30   optimize large directories of files on said client for faster file accesses.

12.   The process of claim 9, wherein said sequence of file blocks is tied to specific user input and wherein said client pre-fetches file blocks based on user input to said application program.

35

13.   The process of claim 1, wherein said installation monitoring means records the state of said local computer system before said installation process begins to

give a more accurate picture of any modifications that are observed by said installation monitoring means.

14. An apparatus for converting a conventionally coded computer application program into a data set suitable for streamed delivery across a network from a server and concurrent execution on a client in a computer environment, comprising:

installation monitoring means for monitoring the installation process of said conventionally coded application program on a local computer system;

wherein said installation monitoring means monitors the modifications that said installation process makes to the system registry of said local computer system and records the system modification data;

wherein said installation monitoring means monitors and records any file modifications made by said installation process;

a module for sorting said system modification data and said file modification data and removing duplicate entries;

a module for parameterizing all of said local computer system's specific registry keys, value names, and values in said system modification data and said file modification data; and

data set creation means for processing said parameterized system modification data and said parameterized file modification data to create a data set suitable for streaming over said network.

15. The apparatus of claim 14, wherein said data set creation means creates a runtime data set, said runtime data set consists of all regular application files and directories containing information about said regular application files.

16. The apparatus of claim 15, wherein said data set creation means creates an initialization data set that is the first set of data streamed from said server to said client, said initialization data set prepares said client for streaming of said runtime data set.

17. The apparatus of claim 15, wherein said directories contain lists of file names, file numbers, and the metadata associated with the files in a particular directory.

18. The apparatus of claim 14, wherein said data set creation means creates a versioning table that contains a list of root file numbers and version numbers for

tracking application patches and upgrades, and wherein each entry in said versioning table corresponds to one patch level of an application with a corresponding new root directory.

5   19.   The apparatus of claim 18, wherein said versioning table is sent to said client by said server, said client compares said versioning table with said client's root file number for the particular application program to find the necessary files required for a software upgrade or patch.

10   20.   The apparatus of claim 14, further comprising:
a user interface that allows an operator to examine all changes made to said local computer system during said installation process and to edit said system modification data and said file modification data.

15   21.   The apparatus of claim 14, wherein said installation monitoring means monitors said application program as it runs and is being configured for a particular working environment on said local computer system and records common configurations of said application program thereby allowing said common configurations to be automatically duplicated on other client machines.

20

22.   The apparatus of claim 14, further comprising:
program profiling means for capturing the sequence of file blocks being accessed during normal execution of said application program.

25   23.   The apparatus of claim 22, wherein said sequence of file blocks is used to pre-cache frequently used blocks on said client before said application program is first used by a user.

24.   The apparatus of claim 22, wherein said sequence of file blocks is used to
30   optimize large directories of files on said client for faster file accesses.

25.   The apparatus of claim 22, wherein said sequence of file blocks is tied to specific user input and wherein said client pre-fetches file blocks based on user input to said application program.

35

26.   The apparatus of claim 14, wherein said installation monitoring means records the state of said local computer system before said installation process

begins to give a more accurate picture of any modifications that are observed by said installation monitoring means.

27. A program storage medium readable by a computer, tangibly embodying a program of instructions executable by the computer to perform method steps for converting a conventionally coded computer application program into a data set suitable for streamed delivery across a network from a server and concurrent execution on a client in a computer environment, comprising the steps of:

providing installation monitoring means for monitoring the installation process of said conventionally coded application program on a local computer system;

wherein said installation monitoring means monitors the modifications that said installation process makes to the system registry of said local computer system and records the system modification data;

wherein said installation monitoring means monitors and records any file modifications made by said installation process;

sorting said system modification data and said file modification data and removing duplicate entries;

parameterizing all of said local computer system's specific registry keys, value names, and values in said system modification data and said file modification data; and

providing data set creation means for processing said parameterized system modification data and said parameterized file modification data to create a data set suitable for streaming over said network.

28. The method of claim 27, wherein said data set creation means creates a runtime data set, said runtime data set consists of all regular application files and directories containing information about said regular application files.

29. The method of claim 28, wherein said data set creation means creates an initialization data set that is the first set of data streamed from said server to said client, said initialization data set prepares said client for streaming of said runtime data set.

30. The method of claim 28, wherein said directories contain lists of file names, file numbers, and the metadata associated with the files in a particular directory.

105

31.   The method of claim 27, wherein said data set creation means creates a versioning table that contains a list of root file numbers and version numbers for tracking application patches and upgrades, and wherein each entry in said versioning table corresponds to one patch level of an application with a corresponding new root directory.

32.   The method of claim 31, wherein said versioning table is sent to said client by said server, said client compares said versioning table with said client's root file number for the particular application program to find the necessary files required for a software upgrade or patch.

33.   The method of claim 27, further comprising the step of:

providing a user interface that allows an operator to examine all changes made to said local computer system during said installation process and to edit said system modification data and said file modification data.

34.   The method of claim 27, wherein said installation monitoring means monitors said application program as it runs and is being configured for a particular working environment on said local computer system and records common configurations of said application program thereby allowing said common configurations to be automatically duplicated on other client machines.

35.   The method of claim 27, further comprising the step of:

program profiling means for capturing the sequence of file blocks being accessed during normal execution of said application program.

36.   The method of claim 35, wherein said sequence of file blocks is used to pre-cache frequently used blocks on said client before said application program is first used by a user.

37.   The method of claim 35, wherein said sequence of file blocks is used to optimize large directories of files on said client for faster file accesses.

38.   The method of claim 35, wherein said sequence of file blocks is tied to specific user input and wherein said client pre-fetches file blocks based on user input to said application program.

39.   The method of claim 27, wherein said installation monitoring means records the state of said local computer system before said installation process begins to give a more accurate picture of any modifications that are observed b y said installation monitoring means.

5